between the first input signal node (18) and the *collector* of the input transistor (60) of the second amplifier, as shown in Fig. 3. Because the Ngo reference does not teach a coupling circuit being connected between the first input signal node and the base of the input transistor of the second amplifier, the Ngo reference does not anticipate claim 1. Therefore, claim 1 is in condition for allowance.

Claims 2-5 were also rejected under 35 U.S.C. § 102(b) as being unpatentable over Ngo. Claims 2-5 depend from independent claims 1. As such, these claims are allowable with their independent base claims. In addition, it is respectfully submitted that the combinations of features recited in claims 2-5 are patentable on their own merits, although this does not need to be specifically addressed herein since any claim depending from a patentable independent claim is also patentable. See M.P.E.P. 2143.03, citing In re Fine, 5 U.S.P.Q.2d (BNA) 1596 (Fed. Cir. 1988).

Claim Rejections - 35 U.S.C. § 103

Claims 6-16 and 19-20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ngo in view of applicant's admitted prior art (AAPA). For obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. M.P.E.P. § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

With regard to independent claim 6, the Examiner states that the limitations recited in claims 6-12 are met in the rejections of claims 1-5. The Examiner goes on to state that "Ngo et al discloses a read head but fails to specify that the head is a magnetoresistive head . . . [h]owever . . . [i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the disclosure of Ngo to provide a capability of reading the recorded signals using magnetoresistive head . . .." As discussed above, Ngo does not teach each and every element of claim 1. For the same reasons discussed above with regard to claim 1, Ngo fails to teach "[a] first coupling circuit being connected such that the capacitor and the active element are coupled in series between the first input signal node and a base of the input transistor of the second amplifier circuit," as required by claim 6. As stated by the Examiner, the AAPA reference is combined with Ngo for

the sole purpose of teaching a magnetoresistive read head. Therefore, the combination of Ngo and the AAPA references does not teach or suggest a "first coupling circuit being connected such that the capacitor and the active element are coupled in series between the first input signal node and a base of the input transistor of the second amplifier circuit. . .," as required by claim 6. Because the combination of Ngo and AAPA do not teach or suggest each element of claim 6, the references do not render claim 6 obvious. Therefore, claim 6 is in condition for allowance.

Claims 7-10 were also rejected under 35 U.S.C. § 103(a) as being unpatentable over Ngo in view of AAPA. Claims 7-10 depend from independent claim 6. As such, these claims are allowable with their independent base claims. In addition, it is respectfully submitted that the combinations of features recited in claims 7-10 are patentable on their own merits, although this does not need to be specifically addressed herein since any claim depending from a patentable independent claim is also patentable. See M.P.E.P. 2143.03, citing In re Fine, 5 U.S.P.Q.2d (BNA) 1596 (Fed. Cir. 1988).

Independent claim 11 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Ngo in view of AAPA. The Examiner states that the limitations recited in claim 11 are met in the rejections of claims 1-5. The Examiner goes on to state that "Ngo et al discloses a read head but fails to specify that the head is a magnetoresistive head . . . [h]owever . . . [i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the disclosure of Ngo to provide a capability of reading the recorded signals using magnetoresistive head . . .." As above, the AAPA reference is combined with Ngo for the sole purpose of teaching a magnetoresistive read head. Claim 11 recites "a first coupling circuit comprising a first coupling transistor having a base connected to the first input signal node, a collector connected to the fixed potential, and an emitter ac coupled to a base of the second input transistor. . ." As seen in Fig. 3, the Ngo reference does not teach a coupling circuit as described by claim 11, as the bases of transistors 62 and 64 are not connected to any of the input nodes 18-21. Transistors 44, 46, 58 and 60 each have a base connected to inputs 18 or 19, but do not have an emitter coupled to a base of any other transistor. Therefore, the combination of Ngo and the AAPA references do not teach or

suggest a "a first coupling circuit comprising a first coupling transistor having a base connected to the first input signal node, a collector connected to the fixed potential, and an emitter ac coupled to a base of the second input transistor. . ." as required by claim 11. Because the combination of Ngo and AAPA do not teach or suggest each element of claim 11, the references do not render claim 11 obvious. Therefore, claim 11 is in condition for allowance.

Claim 12 was also rejected under 35 U.S.C. § 103(a) as being unpatentable over Ngo in view of AAPA. Claim 12 depends from independent claim 11. As such, this claim is allowable with its independent base claim. In addition, it is respectfully submitted that the combinations of features recited in claim 12 is patentable on its own merits, although this does not need to be specifically addressed herein since any claim depending from a patentable independent claim is also patentable. See M.P.E.P. 2143.03, citing In re Fine, 5 U.S.P.Q.2d (BNA) 1596 (Fed. Cir. 1988).

Independent claim 13 was rejected under 35 U.S.C. §103(a) as being unpatentable over Ngo in view of applicant's admitted prior art (AAPA). As above, the AAPA reference is combined with Ngo for the sole purpose of teaching a magnetoresistive read head. Claim 13 recites "a first transistor having a base, a collector, and an emitter, wherein the emitter is connected to the first input signal node." The Examiner states that "Ngo discloses a read system comprising: a first and second input nodes (figs 3-4 elements 18-21); a first transistor...and second transistors...(see figs. 3-4 elements 44, 46, 58 and 60 and disclosure thereof). . .." However, the Examiner does not detail the specifics of the connection between the emitter of the first transistor and the first input signal node. A review of Figs. 3-4 of the Ngo reference indicates that none of the input signal nodes 18-21 identified by the Examiner are connected to the emitters of the transistors 44, 46, 58, and 60 identified by the Examiner. Signal nodes 20 and 21 are connected to the collectors of transistors 44 and 46 in Fig. 3, and to the collectors of transistors 70 and 72 in Fig. 4. Signal nodes 18 and 19 are connected to the bases of transistors 44 and 58, and 46 and 60, respectively, as well as capacitors 40 and 42, respectively. The Examiner's rejection of claim 13 fails to describe how the Ngo reference teaches or suggests the connections between most of the circuit elements defined in claim 13, although the Applicant does not believe that a discussion of each limitation of claim 13 is necessary

in light of the above argument. Because the combination of Ngo and AAPA does not teach or suggest each element of claim 13, the references do not render claim 13 obvious. Therefore, claim 13 is in condition for allowance.

Independent claim 14 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Ngo et al in view of AAPA. The Examiner states that the limitations recited in claim 14 is met in the rejections of claims 6-12. As above, the AAPA reference is combined with Ngo for the sole purpose of teaching a magnetoresistive read head. For the same reasons discussed above with respect to claims 1 and 6, Ngo does not teach "coupling a first capacitor and a first active element in series between the first input signal node and a *base* of the second input transistor;" as required by claim 14. (emphasis added). As shown in Fig. 3 of the Ngo reference, a capacitor (40) and a first active element (64) are connected in series between the first input signal node (18) and the *collector* of a second input transistor (60). Therefore, the combination of Ngo and the AAPA references does not teach or suggest a "coupling a first capacitor and a first active element in series between the first input signal node and a base of the second input transistor;" as required by claim 14. Because the combination of Ngo and AAPA do not teach or suggest each element of claim 14, the references do not render claim 14 obvious. Therefore, claim 14 is in condition for allowance.

Claims 15-16 and 19-20 were also rejected under 35 U.S.C. § 103(a) as being unpatentable over Ngo in light of AAPA. Claims 15-16 and 19-20 depend from independent claim 14. As such, these claims are allowable with their independent base claims. In addition, it is respectfully submitted that the combinations of features recited in claims 15-16 and 19-20 are patentable on their own merits, although this does not need to be specifically addressed herein since any claim depending from a patentable independent claim is also patentable. See M.P.E.P. 2143.03, citing In re Fine, 5 U.S.P.Q.2d (BNA) 1596 (Fed. Cir. 1988).